Water Quality in the Shawnigan Lake Community Watershed

Complaint Investigation 010320

FPB/IRC/70

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The Investigation

Shawnigan Lake Watershed Watch, an organization made up of local residents, complained to the Forest Practices Board about the management of the water resource in the watershed. The organization is concerned that forest development on private lands in the Shawnigan Lake watershed, located in the South Island Forest District, is not being adequately considered before harvesting is approved on Crown land.

Background

The Shawnigan Lake watershed is a 10,500-hectare community watershed located approximately 45 kilometres northwest of Victoria. It is a popular area for both full-time and seasonal residents. It also has industrial forestry operations on both Crown and private land. Approximately 25 percent of the area is Crown land. Another 25 percent consists of privately owned lots, with the remaining 50 percent being private managed forest land.

The Crown land in the area is managed under the Small Business Forest Enterprise Program (SBFEP) and TimberWest's tree farm licence (TFL) 46 tenure.

The watershed is within the area of the *Vancouver Island Land Use Plan* which government released in 1994. This is not a higher level plan under the Code and is not legally binding. However, a higher level plan for the area consisting of special management zones is legally binding. This higher level plan came into effect on December 1, 2000. The Shawnigan Lake watershed is within a zone designated for general and basic management. There are no additional restrictions placed on the watershed beyond requirements already in effect under the *Forest Practices Code of British Columbia Act* and regulations (the Code).

The Shawnigan Lake watershed was established as a community watershed under the Code. Shawnigan Lake Watershed Watch was formed as a society in 2000, and has about 130 members. Members have participated in discussions and field trips with licensees and forest district staff to review forest development plans (FDPs). They have also gone to the Land Reserve Commission regarding concerns about private land logging in the watershed. The group is concerned with the level of development that is occurring on private land and the overall effect that might have on water quality. It feels that unlogged areas of Crown land provide the only possibility of retaining some of the mature forest that remains in the watershed.

In April 2001, Shawnigan Lake Watershed Watch wrote to the Ministry of Forests (MOF) district and to the Minister of Forests with concerns about the rate of cut and impacts on water quality and biodiversity. The letter to the minister stated, "...we would appreciate an acknowledgement that all FDPs for tenured public lands must be broad enough in scope to encompass the effects of private lands logging."

In May 2001, Shawnigan Lake Watershed Watch filed a complaint with the Board asserting that the impact on the watershed from development on private land should be considered before approving development on Crown land. The group requested that a moratorium be placed on Crown land logging until the effects of activities on private land were known and until a watershed assessment was completed.

The Board decided to focus the investigation on the complaint issue related to water management. An additional complaint issue relating to the management of biodiversity would be covered under a concurrent, but separate investigation.

Relevant Legislation

Section 40: *Forest Practices Code of British Columbia Act*, giving effect to operational plans

Section 41: *Forest Practices Code of British Columbia Act*, approval of operational plans

Section 12: *Operational Planning Regulation*, terrain assessment requirements

Section 14: *Operational Planning Regulation*, watershed assessment requirements (section 32 in 1997)

Issue

Was it appropriate for government officials to be satisfied that the 2000-2004 FDPs for Crown land would adequately manage and conserve the water resource without a watershed assessment and without impacts from private land development being considered?

Discussion

In evaluating the decisions to approve the 2000-2004 FDP covering the Shawnigan Lake watershed, the Board considered whether Code requirements had been met and whether the decision-makers considered adequate information.

The Code does not specifically require the district manager or designated environment official to consider the effect of development activity outside of Crown land. The only area of the Code that considers development on private lands is the *Coastal Watershed Assessment Procedures Guidebook*. The guidebook recommends that these areas be considered when determining a value for the equivalent clearcut area of a watershed. The equivalent clearcut area is a concept used to predict changes to peak flows in a watershed. Significant increases in peak flows in a stream can disturb stream channels and cause increased erosion and sedimentation.

Section 14(1) of the *Operational Planning Regulation* (OPR) requires that a watershed assessment must be completed within the previous three years before an FDP is submitted for a community watershed. However, section 14(4) authorizes the district manager to relieve a person of the requirement for a watershed assessment if the district manager and the designated environment

official are satisfied that the proposed development would not affect the watershed in a significant way.

In 1997, a consulting hydrologist conducted a review of the Shawnigan Lake watershed for MOF. He made several recommendations in his report, including one stating that the district manager should relieve the licensee and the SBFEP from the requirement to conduct a watershed assessment. The reason given was that the results of a watershed assessment can only be applied to public lands. Since there is only a small proportion of Crown land in the watershed, it was not clear to the consultant how a watershed assessment would be useful.

Another factor was that the watershed contains a large lake with a buffering capacity. The sub-basins around the lake generally are separate, so the streams do not join before they enter the lake. Because of this, concerns about equivalent clearcut area and changes to peak flows were not relevant to the entire watershed. Development in one sub-basin would not affect the flows elsewhere in the watershed.

The 1997 consultant's report states, "In addition, water quality effects related (sic) the extensive area of lake shoreline developed for residential use, the use of the lake for recreational boating, and the extensive residential development located throughout the lower one-third of the watershed will likely overwhelm any potential forestry effects." The consultant recommended that the efforts of the SBFEP and the licensee should be directed to managing potential site-specific problems. The recommendations are largely directed at sediment control issues.

The consultant commented in the report that a watershed assessment could be done in two sub-basins that had a greater percentage of Crown land. These included McGee Creek and West Arm Creek. In a June 30, 1997 letter to MOF, Ministry of Environment, Lands and Parks (MELP, now the Ministry of Water, Land and Air Protection), staff recommended that any further assessment of these two sub-basins should be limited to a reconnaissance sediment survey to confirm the absence of any sediment delivery to stream channels from existing roads or stream crossings within the TFL. MELP staff also proposed a methodology for considering small areas of Crown land. However, this was not specific to the Shawnigan Lake watershed. The methodology suggests that the emphasis should be placed on the field reconnaissance and documentation of actual site conditions.

MOF district staff interpreted the MELP letter as a recommendation to focus on proposed cutblocks and to try to limit the impact. This involves conducting a detailed assessment of each cutblock and trying to extrapolate the potential for each cutblock to generate sediment fines and the potential for these to enter streams.

In 1999, the district manager gave the licensee and the SBFEP an exemption from the requirement to prepare a watershed assessment under section 14(4) of the OPR and requested confirmation that a sediment sources survey had been done, as recommended by the consultant's report. The MELP regional manager supported this.

The 2000-2004 FDP for the SBFEP states that a sediment source survey of roads on Crown land within the watershed was completed. In addition, the plan states that all proposed cutblocks

and roads were subject to an assessment of erosion potential and sediment-delivery potential in June 2000. The 2000-2004 FDP for TFL 46 states that a review of roads within the watershed in the TFL was completed in 1999. It states that no sediment sources associated with roads were found.

The district manager had the authority and complied with the Code in giving the licensee and the SBFEP an exemption from the requirement for a watershed assessment. Completed assessment work was consistent with the recommendations made in the consultant's report.

To protect water resources in community watersheds, section 12 of the OPR requires that terrain-stability hazard mapping and soil-erosion potential mapping must be completed before a plan is submitted for approval (as with TFL 46) or before the district manager gives effect to a plan (as with the SBFEP).

In 1997, terrain-stability mapping and surface erosion mapping were completed for TFL 46. Terrain-mapping and soil-erosion mapping were completed for the area under the SBFEP in 1998. Proposed cutblocks in the watershed were assessed for the potential to generate sediment. The planning for the SBFEP and TFL 46 FDPs complied with the Code requirements for a terrain assessment in community watersheds.

The 2000-2004 FDP for TFL 46 includes a list of 10 measures to govern operations with respect to water management. This includes conducting development and harvesting activities in the Shawnigan Lake watershed consistent with the recommendations of the 1997 consultant's report and with the recommendations of the 1997 terrain-stability and soil-erosion mapping report.

In the district manager's rationale for giving effect to the 2000-2004 SBFEP FDP, she notes that MELP water management staff were satisfied that the cutblocks did not pose any obvious concerns with respect to water management. The district manager also notes that the proposed silviculture system was partial cut and not clearcut, as had apparently been expected by local water users.

In evaluating the approval of the FDPs, the Board considered the Code requirements for managing community watersheds; the advice and information available to the decision-makers, given that there was no watershed assessment; and how the decision-makers considered that information.

The district manager and designated environment official had enough information available to them to be satisfied that the TFL 46 and SBFEP FDPs would adequately manage the water resource. The Code requirements for assessments were met and the consulting hydrologist's recommendations to assess potential sediment sources were followed.

Conclusions

The Code does not address the issue of logging impacts on private lands except through a recommendation in the watershed assessment guidebooks that private land be included when determining the equivalent clearcut area in a watershed. The exemption from a watershed assessment, and the completed terrain-stability assessments, complied with Code requirements. The consulting hydrologist's 1997 review provided officials with the professional opinion that the lake had a large buffering capacity and that peak flows were not an issue. This was relevant to development on both private and Crown land.

The Board concludes that it was appropriate for the district manager and the designated environment official to be satisfied that the SBFEP and TFL 46 FDP would adequately manage and conserve the water resource in the Shawnigan Lake watershed.

Commentary

The Board notes that this complaint is a result of forest resource management issues overlapping the boundaries between private and Crown land, which are controlled under different regulations and administered by different government agencies. The complainant has to deal with different legislation for development in the same watershed. The managed forest on private land is regulated under the *Forest Land Reserve Act*. The complainant has contacted the BC Land Reserve Commission about its specific concerns with logging on private land.